



Community Based Comprehensive Recovery

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D6.3 Organisation of an international workshop at an ISCRAM annual conference

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Executive Summary:

Deliverable 6.3 describes the attendance of the COBACORE project at the annual ISCRAM (Information Systems for Crisis Response and Management) conference and the various activities undertaken. The conference is held in high-regards by prominent researchers in the fields of systems for crisis response and disaster management, but is also well known in the practitioners circles. The COBACORE project attended the conference with a delegation from several of the consortium project partners, to not only present the project but also solicit input and feedback on the course taken.

The COBACORE project used several 'channels' to engage with the conference which included several poster presentations, presentations in different tracks, and participating in speed networking events. The COBACORE project also presented itself with a stand placed centrally in the main atrium of the venue. Moreover, a modified version of the COBAGame (as used in IMEV1) was used to get participants interested and get to know the project in a hands-on and immersive manner. These various channels led to significant interest in the project.

The insights gained at the ISCRAM conference came at a time that the COBACORE project had established its goals and objectives, finalised and evaluated its concept, which were validated by many of the topics discussed at the conference in the various tracks. But with sufficient time and flexibility to incorporate meaningful feedback in the project, especially in the further development, adoption and implementation, the conference also helped to flesh out the future direction of the COBACORE project. Not least because of the attendance of other EU project with whom meaningful interactions helped to position COBACORE in the (future) 'market' of FP7 projects.

Finally, the COBACORE project itself also provided valuable insights to the conference participants and other attending projects. The approach to demonstrate the COBAGame, made the COBACORE project stand-out and inspired other projects to look into serious gaming for an evaluation and dissemination tool as well. Finally, the COBACORE project demonstrated to the academic community how research and practice can be connected. The continued interaction and evaluations of the COBACORE project and the approach used to go from concept to (prototype) implementation was of particular interested to the ISCRAM community.

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Preamble to this deliverable

This deliverable, '*D6.3 Organisation of an international workshop at an ISCRAM annual conference*', reports on the COBACORE workshop and dissemination that was done during the 2015 ISCRAM conference in Kristiansand, Norway (24-27 May, 2015).

During the Final Review of the COBACORE project, the balance between effort planned and output delivered under D6.3 was an item of discussion. It is important to note that the planned effort for this deliverable¹ covered more than just the workshop at the ISCRAM conference. The ISCRAM workshop was one of many planned and unplanned dissemination activities of the project. These activities were largely managed under Task 6.1 (*Development of a dissemination strategy and resources to maximize impact*). The prime deliverable that was associated to T6.1 was D6.3, and, because the submission system demanded full allocation of effort to deliverables, most effort was given to D6.3. In practice, the effort was spent on many other valuable dissemination and impact activities.

For instance, parts of the planned D6.3 effort were used for presenting the COBACORE results at conferences such as the ESR Dublin 2015 (4-7 November, 2015), an international symposium featuring practitioners and academics in disaster management and related fields. In addition, parts of the effort was spent on the organisation of events that focused on key COBACORE end-users, especially in the in the final phase of the project where exploitation of the results became more prominent. These include a COBACORE workshop at the International Federation of Red Cross and Red Crescent Societies (IFRC) headquarters in Geneva, Switzerland (with a focus on humanitarian organisations) and the 'New Perspectives' Final Event in Leiden, Netherlands (1 March, 2016).

As such, the effort associated with D6.3 should be seen in a broader light than just the workshop described in this report. Full details of the dissemination activities of project partners can be found in D6.4 '*Dissemination Report – Reporting Period 1*' and D6.5 '*Dissemination Report – Reporting Period 2.*', and the reader is invited to peruse these reports to obtain a good view of the many dissemination and exploitation activities undertaken in the COBACORE project.

¹ The originally planned effort for D6.3 was 24 person-months (COBACORE Description of Work)

1 ISCRAM

ISCRAM is the international association for Information Systems in Crisis Response and Management. The association was conceived in 2004 by Dr. Bartel Van de Walle (one of the members of the COBACORE consortium), Dr. Benny Carlé and Dr. Murray Turoff. From 2004 to 2009 the ISCRAM community expanded into a globally active community of researchers, academics, practitioners and policy makers. In 2009, the association was formally established as a not-for-profit in Belgium. The objective of ISCRAM is to *“promote and facilitate cooperation among all parties involved in this domain, including researchers, practitioners and professionals, technical experts and other experts and policy makers; develop activities that contribute to the primary mission; promote and disseminate best practices and research results on the development, maintenance, delivery, and management of information and communication systems for crisis response and management; promote and facilitate leading-edge education and training in this domain.”*². Since 2004, the association has grown to over 250 members from over 35 different countries.

To accomplish these objectives, ISCRAM organises the annual ISCRAM conference, which shifts location every year, traditionally alternating between the USA and Europe. However, the upcoming conference in 2016 will be held in May in Rio de Janeiro in Brazil. The conference provides a platform for both academics and practitioners to share research in development, new insights and not least, a place for people working in the field of information systems for crisis response and disaster management to meet. The conference has an academic nature, and includes peer-review processes for the papers and posters submitted and a doctoral colloquium preceding the conference. SCOPUS and other major academic repositories index the accepted papers and conference proceedings. In addition to the academic component, the conference has also developed a strong rapport with practitioners and offers special tracks for more applied research and insights and often keynote speakers are invited from professional response organisations. While the conference is the major event organised by the ISCRAM association, several other activities are deployed to develop and support their community.

The ISCRAM summer school is an annual gathering of (PhD) students from both academic institutions and those pursuing a PhD in their professional career. The summer school provides a week full of lectures by leading scholars, presentations by professionals from prominent organisations. The summer school also includes several workshops and assignment to give students hands-on experience in new techniques and gain insights through practical experience. Furthermore, part of the summer school traditionally takes place at the Campus Vesta, a school and training grounds for emergency responders in Antwerp, Belgium, further increasing the integration of academic and practice. Finally, akin to the conference, the summer school provides several leisurely activities and opportunities for participants to meet, mingle and exchange ideas. Besides the main conference, the ISCRAM community also organises several other smaller conferences throughout the year. In previous years these included ISCRAM-Med (Mediterranean) organised in late October 2015 in Tunisia and ISCRAM-Asia organised in June 2014 in Sri Lanka. ISCRAM also publishes a monthly newsletter ‘The Situation Report’ and maintains regular updates on its website and social media outlets for its members and other interested parties.

All of the above activities have established ISCRAM as a well-known and valuable community and network of both practitioners and academics. A community where not only researchers

² <http://iscram.org/content/about-iscram>

can present their latest ideas and state-of-the-art research to fellow scholars, but also where practitioners can be updated on the latest developments and share their own insights, present challenges faced and get connected to academics. In addition to the formal presentations and interactions, ISCRAM also motivates all interested groups to form collaborations and deploy new initiatives to both further the academic knowledge (for example through testing by or with professionals) and the practical implications (by presenting challenges to academics or pose research questions).

1.1 ISCRAM Conference 2015

The 12th International Conference on Information Systems for Crisis Response and Management was held in Kristiansand, Norway, hosted by the University of Agder and the Centre for Integrated Crisis Management (CIEM), took place from May 24th to May 27th. The theme of the conference was “Getting ready for the unexpected!”, specifically aimed at the challenge of designing crisis management systems that cross boundaries and that help to deal with unforeseen crisis situations.

As usual, the 2015 ISCRAM conference served as a platform to stimulate discussions and strived to find new insights that improve the design of crisis information systems. The keynote speakers included Professor Valérie November on ‘Informing and Deciding in a Context of Uncertainty, Risk and Crisis’ and Lars Peter Nissen, from the ACAPS project on “Wag the Dog – Information management and decision making in the humanitarian sector”.

1.1.1. Participants

The ISCRAM conference 2015 hosted around 200 participants from various academic institutions and practitioners from international organisations such as Red Cross and United Nations organisations, as well as representatives of smaller NGO’s. In addition, several members of EU funded research projects (namely FP7) were present as well as the conference included specific room in the program for the projects (see below).

Overall the conference established a program that allowed the ISCRAM objectives of increased interaction and the fostering of new ideas. In addition to the above listed, cross cutting domain session, the conference provided ample opportunity to build connections and network through informal gatherings, including various receptions, a formal dinner and extended breaks as well as dedicated slots for poster & project presentations.

1.1.2. Topics

Within the theme of the conference ‘Getting ready for the unexpected’, several research-tracks were offered for participants to submit either their long-research or short research-in-progress papers to. The different subjects covered various theoretical topics, such as Network Theory and Analytical Modelling and Simulation. Tracks also included more practice-focused topics including Planning, Foresight and Risk Analysis and Social Media Studies. Furthermore, it includes evaluation and design sessions, for example Ethical, Legal and Social Issues and Human Centered Design. Finally, several tracks focused on the collaboration between academics and practitioners: Practitioner Cases and Practitioner-Centered Research and Collaborative Work Practices.

As the conference chairs explained in the introduction of the proceedings, the paper submission illustrates the importance of data collection, processing and sharing in modern

crises between different organisations and stakeholders³. The majority of papers submitted dealt with these topics and presented new research about methods for improving situational awareness and the potential of data and data-science related technologies. In addition, there were a significant number of papers on digital initiatives such as online volunteers. While the papers for the conference were submitted before January 2015, the then recent earthquake in Nepal was frequently used during the presentations and discussion to augment the research results or present on-going work.

Tags

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Figure 1: i8kTag cloud based on the keywords of the submitted papers

1.1.3. Link to COBACORE

‘Getting Ready for the Unexpected!’ was the theme of the ISCRAM 2015 Conference in Kristiansand, Norway. As mentioned above, the different tracks and topics discussed at the conference, focused on changes in the crisis management and approach. As illustrated above, there was a strong focus – content-wise – on the potential of data collection and processing in the papers and sessions. Combined with the focus on the digital volunteers and involvement, the majority of the presented research dealt with the *potential* of data, information and related technologies. This provided an excellent opportunity for the COBACORE project to demonstrate not only the potential of these trends and emerging technologies, but even more how to leverage that potential. COBACORE builds on existing research and trends but extends the current state of the art research to a practical implication. As such, the presence of the COBACORE project illustrated the ISCRAM objectives of connecting academic research to practice, including the approach taken within the project to make this connection. Conversely, the ISCRAM conference provides an excellent opportunity to verify both the research component of the project, as well as the practical development.

Besides the content-wise connection with the conference, the ISCRAM organizers also provided a more operational platform to COBACORE and similar projects. The conference organizers dedicated several time-slots for the EU projects and organised a discussion/panel session on broader topics related to the EU projects, the adoption of the results, the combination of practice and research in one project, and key success factors. Furthermore, the ISCRAM organisation provided options for EU projects to host special sessions, gatherings and workshops, in addition to the option to have a stand in the main atrium where the participants gathered during the coffee-breaks and reception for demos.

1.2 COBACORE approach

³ <http://iscram2015.uia.no/wp-content/uploads/2015/05/Proceedings-Introduction.pdf>

As part of the dissemination and exploitation strategy, The COBACORE project is actively searching for and engaging with different channels to disseminate the project results, but also to gather valuable to will help to improve the quality and impact of the project results. One of these 'channels' is the academic community and in particular the ISCRAM conference. As mentioned in the description of the work, the COBACORE project as set the goal to organize a workshop at one of the annual ISCRAM conferences either in year 2 or 3 of the project, which is ISCRAM 2015 or ISCRAM 2016 respectively. The goals of this workshop and conference participation include the demonstration of the platform and the discussion of supporting technologies of needs assessment.

The COBACORE consortium has decided that participation in the ISCRAM 2015 conference was preferred over the 2016 conference. At two-thirds of the project run-time there are significant results to be shown (prototype, evaluation results and the concept) but also sufficient time and flexibility to incorporate feedback and new insights gained from the participation in the conference. In addition to the mentioned goals, the consortium also set-out to display the approach that the COBACORE has project has taken from the start: to actively include practitioners in the project, incorporate academic research where possible and continuously verify assumptions, prototypes and results through evaluation. This approach closely mirrors the open innovation approach of the ISCRAM community, and the COBACORE project gladly contributes to that ambition. Additionally, ISCRAM conference attendants represent an interesting and diverse pool of renowned researchers and experienced practitioners in the field of disaster management and crisis response.

This diverse audience also required the COBACORE project to consider an appropriate presence. Traditionally projects organize workshops in dedicated time-slots in the days preceding or following the conference. While these workshops *can* be of value, experience shows that the number of participants is low and often a poor representation experience and knowledge present during the conference itself. At the same time these workshops are labour intense and considering that COBACORE has held many partial evaluations, an alternate strategy has been chosen to engage with the participants.

Rather than a single workshop before the conference, the COBACORE project opted to send a strong delegation that used different options to 'present itself' during the conference. The COBACORE project 'inserted' itself during the poster-sessions, EU-symposium, participated in the speed networking events, and attended various sessions. In addition to these formal engagements, the COBAGame was introduced and played throughout the conference, contacts were made a receptions and a stand was centrally placed at the conference. This 'broad' approach allowed the COBACORE team-members to increase both the quantity and the 'depth' of the interactions with the conference participants; including people who would not have attended the workshop (for example because of time-constraints). The various activities deployed are described in the next section.

2 COBACORE at the ISCRAM 2015 conference

The strong link with the topics of the conference, the diversity in both knowledge and background of the audience present and the practical support provided by the conference, made the ISCRAM 2015 conference an outstanding dissemination platform to the project. The conference not only allowed the COBACORE team to present the latest project results, but also to provide them with opportunities to converse with peers and practitioners about further the development of the project – on valuable additional functions & features, the evaluation process, and the implementation and dissemination process.

2.1 Presence at the ISCRAM EU Project Symposium

The COBACORE project, like other EU project present at the conference presented their objectives, ideas and results. The conference also reserved ample opportunity to network and connect to similar projects and explore potential synergies and other opportunities for collaboration, or to discuss the most important trends and developments in research funding. COBACORE was one of 19 European projects that were presented at the first ISCRAM EU project Symposium on Wednesday, May 27, as part of an overview of the best European Research in Crisis Response.

The COBACORE team was represented by Stephen Purcell of Future Analytics Consulting (IE), Martijn Neef of TNO (NL), Josef Ristvej of Zilinska University (SK) and Kenny Meesters from Tilburg University (NL). These representatives provided a stand in the main atrium of the venue throughout the conference, participated in the EU project symposium with a presentation and in the following discussions, and provided the COBAGame for the participants. Additionally, they engaged in face-to-face meetings and discussion throughout the conference. Finally, the physical presence of the COBACORE team was augmented by several project members who were involved remotely. This remote team supported engagement via social media, provided players with online assistance for the COBAGame and followed-up on leads provided by the team at the venue.

2.2 Presentation & Posters

As part of the EU symposium the representatives of the COBACORE project present, gave a 20-minute project presentation, which highlighted several important aspects of the project: the concept, the results obtained thus far and the outline of the work for the final year of the project. In particular, the presentation focused on the issues identified in Work Package 1 and the resulting concept. Next the resulting design and approach was introduced, with special attention on the translation of abstract ideas into practical implementation and with continuous verification. Finally, the presentation zoomed in on the steps planned for the final year of the COBACORE project. This part in particular served as fuel for the discussion following the presentation, the results of which are discussed below in section 5.

In addition to the presentation, and to further increase the exposure of the COBACORE project, two research posters were presented during the poster reception, which are included in the appendix:

- **‘Improving early recovery decision making by including communities in the information gathering and decision making process’** by Kenny Meesters and Bartel Van de Walle (Tilburg University). This poster focused on the interaction between communities and professionals in term of information needs and offers, one of the core principles of the COBACORE project. This poster was closely tied to the work done in WP1 and WP5.
- **‘Towards an Information Framework for Community Based Comprehensive Recovery’** by Leo Galway (UU), Martin Haran (UU), Martijn Neef (TNO), Conor Woods (Spatialest). This poster highlighted work done in WP2 on the key information components that drive the COBACORE platform and how they set the foundation for various user features.

The posters were, intentionally, complementary. The poster session mainly attracted fellow researchers working in fields that shared some elements with the COBACORE project, such as digital (online) volunteers, social media in crisis response and linking relief to recovery in disaster management. The materials presented, both the posters and the presentation will also be uploaded on the COBACORE-website for future use by the attendees and others.

2.3 Stand & personal contacts

Besides participating in the sessions, the COBACORE project was also present with a stand in the main atrium where attendees gathered during breaks and receptions. The stand featured a roll-up banner listing the most prominent parts of the project, including the partners, objectives and contact information. Furthermore, the stand offered a large screen connected to a laptop showing the COBACORE platform, displaying the live-information entered by participants in the COBAGame (see below). This also allowed the COBACORE project members to do live demo's to interested conference participants and shows project results (pictures, data) for example from the intermediate or partial evaluations. In addition, it showed various videos that have been created as part of the COBACORE dissemination strategy in a loop on the screens. The stand proved a very useful way for further engagement of interested persons, especially following the presentation and poster session. The stand allowed the project members to illustrate how the research findings were translated to an implementation.



Figure 2: Pictures of the COBACORE stand at ISCRAM 2015

The majority of the COBACORE project members present at ISCRAM have been members of the association for several years and have developed warm contacts with other frequent attendees of the conference. Specifically, the academic partners present at the conference introduced their contacts to the COBACORE project. This included researchers from fields such as decision making in crisis response, logistics in disaster management, critical infrastructures or data collection and processing. These exchanges led to new useful insights for both the COBACORE project members and the academics.

Furthermore, the project members also engaged with the professionals present as they have worked with them before or know them through previous meetings. These practitioners come from international crisis management organisations and brought valuable insights and practical considerations for the COBACORE project to consider.

Finally, social media discussions and interactions -supported by the remote team- added an extra dimension to the contacts with the ISCRAM members, both those present at the conference and those who could not attend.

2.4 COBAGame & Social media

One of the highlights of ISCRAM 2015 conference was the opportunity to showcase the COBACORE project and platform using the format of the COBAGame. The COBAGame was previously developed as a means to evaluate the platform and concept during the first Intermediate Evaluation (IMEV1). The COBAGame provided participants with a role and objective, allowing them to 'act out' the role as affected or responding community by providing them with an overall scenario and tailored personal situation. The game was well received during the IMEV1 and prompted the redevelopment of the game as a tool to demonstrate the COBACORE concept and platform through an immersive, hands-on experience.

The online game used at the ISCRAM conference was a slightly modified version of the original version used during the IMEV1. This instance simulated a disaster scenario – a major earthquake near the Norwegian town of Kristiansand⁴, where the conference was held. Delegates at the conference received an envelope with cards giving them player profiles and instructions on how to participate. Each player of the game was given a user profile. For example, a participant would log onto the platform as 38-year-old Laura Bakker who was in need of food and shelter (as listed in the profile included in the envelope). Her house had been badly damaged in the earthquake and re-entry was dangerous. A burst pipe meant that Laura's basement was filling with water so she also needed construction supplies. Assistance was also needed for an elderly couple for in her neighbourhood.

Once a player logs on to the COBACORE platform, a GPS map of Kristiansand shows other players in the area, listing their specific needs and offered capacities. Players could engage online and even meet in 'real-life' during the conference to establish a connection. Over the course of the conference the platform filled with various needs and help-offers posted by the participants. The game also encouraged players to extend their profile by adding their own needs and capacities in line with their profile. Once the messages were posted, players could use all the features on the platform to engage with each other for example by exchange messages or creating joint activities.

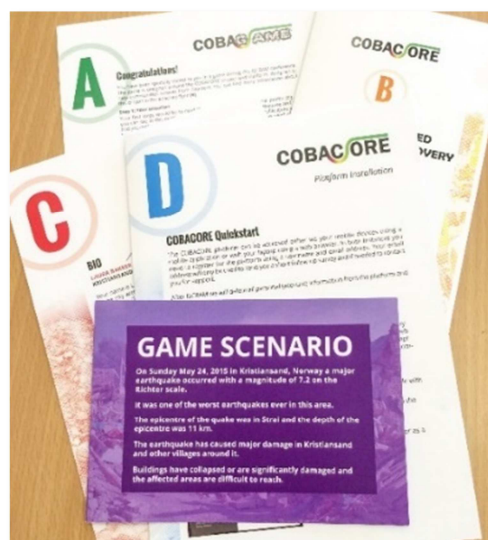


Figure 3: COBAGame material

⁴ <https://en.wikipedia.org/wiki/Kristiansand>

The COBAGame was an important addition to the COBACORE presence at the conference. As the project is on harnessing the resources from the affected community to enable faster and more efficient responses in the wake of a large-scale disaster. The COBAGame enabled players to have their needs matched with the capacities of others affected by the earthquake by coordination professionals, or ‘digital angels’, played by the off-site (remote) COBACORE team members.

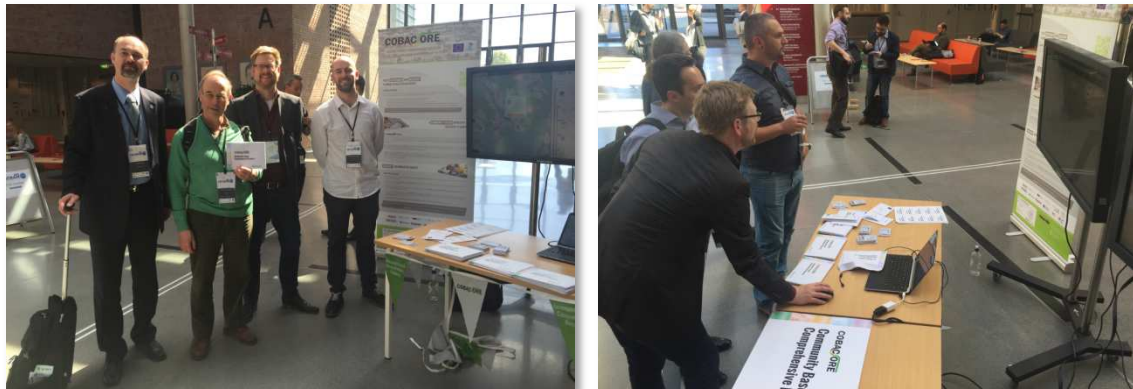


Figure 4: The COBAGame and platform introduced to ISCRAM attendees

The COBAGame, coupled with the online presence, provided a unique ‘selling-point’ of the COBACORE project. As mentioned, several other research projects were present at the ISCRAM conference, but did not have the unique, interactive and continuous presence that made COBACORE stand out from the other projects. In particular, inconspicuous handing out of envelopes continuing the game-materials before and throughout the event contributed to the interest of participants. These envelopes were given without any verbal instructions and this ‘mysterious envelopes’ piqued the attendees interest. This interest was further encouraged by interactions on social media between the participants and the remote team.

3 Results

As described in the previous section, the COBACORE project was present in different ways at the ISCRAM conference, including presentations in the EU symposium, a poster session and a stand. Additionally, the individual engagement with attendees and online discussions provided valuable contacts for the project and is well as insights to further improve the impact of the project. Conversely, the COBACORE team demonstrated some of the project's unique aspects, both in terms of the concept and its translation to a practical implementation, the results obtained thus far, and the approach (development & evaluation) utilised in the project.

3.1 Engagement

The various 'channels' that were used to communicate and disseminate the project throughout the ISCRAM conference were well appreciated by the different groups of attendees. Rather than a single workshop -which on average attract about 15 people at an ISCRAM conference- these multiple forms of interaction enabled a much wider reach for the COBACORE project. The workshops which traditionally take place the day before the event (on a Sunday) only provide interaction with a small group, whereas the current approach allowed us to engage with participants over the course of several days and in ways that ranged from formal (presentation, poster) to more informal (stand at reception, the online engagement and COBAGame). Besides the number of interactions that were reached at ISCRAM and the diverse presence of COBACORE also allowed more meaningful interactions as they catered to the time and opportunity one would have available. This could mean a lower threshold (i.e. not committing for a full day workshop) but also more flexibility to engage ('grab') renowned scientists in their field.

Several elements contributed significantly to both the quantity and quality of the interactions, but most prominently the use of the COBAGame as a means to get participants curious and motivated to learn more about the COBACORE project worked well, and was also well-received by the 'players'. Furthermore, the strong representation of the COBACORE-team allowed us to explore various options to engage audiences and 'connect' to ongoing discussions. The different presentations and posters from direct colleagues of the COBACORE-team members provided a wide-range of options to get in touch with people in a meaningful way. During the course of the conference we explored the following routes to engage with the participants.

- **Presentations:** COBACORE presentation and the Doctoral symposium (Improving early recovery decision making by including communities in the information gathering and decision-making process).
- **Receptions:** 'Beer evening' (with introduction of COBAGame), Speed networking event.
- **Poster sessions:** Tilburg University (Gamification for Data Gathering in Emergency Response Exercises), Ulster University (Towards an Information Framework for Community Based Comprehensive Recovery)
- **Attended sessions:** Ethical, Legal and Social Issues-track, Human Centred Design and evaluation-track, Community Engagement-track, Practitioner Cases and Practitioner-centered Research-track, Social Media Studies-track.
- **Online:** COBACORE platform, Social Media (mainly Twitter).

The stand at the conference served as the central gathering place for these various interactions, even if these were just brief ones. The equipment (tablets, laptops and TV-

screens) allowed us to demonstrate the work-in-progress, provide interested attendees with a hands-on experience and show other relevant COBACORE materials. The stand was also the central place where contact information would be exchanged to stay in touch post-conference. All the materials shared over the course of the conference will also be publicly available on the COBACORE website, encouraging the interested participants to visit the website and learn more about the project. This is of course in addition to the personal contacts and follow-up made during the conference.

3.2 Insights, Leads & Exposure

The various interactions we had led to great insights, both those provided from COBACORE to the ISCRAM community as well as the insights provided from ISCRAM to the COBACORE project. The discussions the COBACORE project members had with the ISCRAM attendees were particularly useful considering the current stage of the COBACORE project at that time. At the end of the second year of the 3-year project, the concept and ideas have not only taken shape, but also been tested and verified in the first evaluations. At the same time, with a still a year to go in the project, received input could well be incorporated and two-way communications with experts would still provide a valuable contribution especially in regards to the adoption. This specific timing made the attendance of COBACORE at ISCRAM invaluable.

3.2.1. Academic development

In the various attended sessions of the research tracks (see above), many of the trends that have been identified by Work Package 1 in our project were discussed. Trends like the use of social media for situational awareness, the potential of digital (remote) volunteers supporting professional services and the importance of community engagement. The presentation and discussion of these trends confirmed the direction taken by the COBACORE project. Moreover, during the discussion of the own project at the EU-symposium, the COBACORE project brought many of these trends together in a meaningful way. These various discussions helped to validate the assumption underlying the COBACORE project and concept.

At the same time, one specific element of the COBACORE project was of particular interest for the ISCRAM community: connecting research to practice. The continued interactions of the COBACORE project throughout the years with practitioners (both within and outside of the consortium) and the rigorous evaluations (partial, intermediate and final) demonstrated to the academic community how concepts, trends and assumptions could not only be validated but also developed and implemented in an incremental approach.

Finally, as a direct result, the COBACORE Board of External Advisors was extended with several prominent researchers and key-note speakers (practitioners) contacted during the ISCRAM conference. In addition, several researchers expressed interest to further engage with the COBACORE project team, for example to explore research collaboration opportunities, or to stay up-to-date on further outcomes of the project.

3.2.2. Practitioners

While the majority of the attendees are part of the academic community, several practitioners present also expressed their interest in the COBACORE project. Many practitioners identified with the challenges presented in the project, such as the (meaningful) engagement with communities and harvesting the potential of social media interactions. In particular, the combination of community-driven response, involving spontaneous unbound volunteers with the needs and concerns of the professional organisations proved interesting for the

practitioners present. COBACORE provides a way to accommodate the dynamic and unpredictable nature of communities in mechanisms that allow professionals to work and coordinate with them, both in a technical manner (through the platform and dashboards) but also in an organisational manner (for example with the Community Liaison Team).

During the discussions following the presentations and at several other moments during the conference, the COBACORE-team present demonstrated how they connect research and practice. The continuous engagement of COBACORE with the field was also of interest to practitioners. Many of the organisations represented at the conference have an interest and are actively conducting their own, however they also want to connect their (and others') research efforts to practice. The approach taken by the COBACORE project was shared with several of these practitioners (UN, Red Cross and other NGOs) as an example of how this could be accomplished. The incremental evaluations, the active involvement of practice and the extensive field-tests along with other aspects were discussed and contacts were established to share these materials with interested parties.

At a more practical level, one of the most prominent points that surfaced in the discussion with practitioners was the issues of the adoption and implementation of the platform. Practitioners, in line with the academic community, appreciate the COBACORE concept and its implementation, but, in contrast to academics, have more specific concerns about the position of the COBACORE platform in a real environment. For example, which organisation should deploy the platform, what are the consequences in terms of accountability, and how is a critical mass (adoption) reached. These key considerations were taken to heart and formed the bases for the work of the COBACORE project in the remaining year.

3.2.3. Other projects

Other projects also funded by the European Union's Seventh Framework Programme (FP7) were also presented at the conference. A full list of projects attending is included in the annex. The following projects were of particular interest to the COBACORE project, because they touched upon the same topics or trends, and can be complementary to COBACORE interests or objectives. Throughout the project COBACORE members engaged directly with:

- The Irish-based Project **Slándáil** which aims to improve the use of social media to enhance the response of agencies to disasters. There is a strong connection between this project and COBACORE in terms of social media use for monitoring and interaction.
- **FORTRESS** Project aims to identify and understand cascading effects of a crisis by using evidence-based information from a range of previous crisis situations. This information could be used to improve the dashboard functions of COBACORE.
- The UK coordinated **POP-ALERT** Project focuses on the technologies, procedures and methods that can be used to improve crisis responses and to take traditional crisis management a step further. This aligns closely with the adoption strategy of COBACORE.
- **DESTRIERO**: Project aims at developing an advanced net-centric information management tool, which structures and presents information to collaborative groups of (international) stakeholder organisations, supports damage and needs assessment and recovery planning. Multi-stakeholder involvement akin to our own project.
- **CascEff**: Modelling of dependencies and cascading effects for emergency management in crisis situations. Which could build on the information available on the platform, and vice-versa inform decision makers about the effects of certain decisions.

- **SecInCoRe**: Secure Dynamic Cloud for Information, Communication and Resource Interoperability based on Pan-European Disaster Inventory. COBACORE could run on the provided infrastructure, taking away several concerns such as data-security.
- **EmerGent**: Emergency Management in Social Media Generation.

Furthermore, other project that were engaged at ISCRAM, but for which not specific coloration is explored:

- **CRISMA**: Modelling crisis management for improved action and preparedness.
- **SECTOR**: Secure European Common information space for the interoperability of first Responders and police authorities.
- **INSIGHT**: Intelligent Synthesis and Real-time Response using Massive Streaming of Heterogeneous Data.
- **DRIVER**: Driving Innovation in Crisis Management for European Resilience.

3.3 Exposure and social media engagement

Twitter List. During the conference we were monitoring social media and engaging with users attending the conference. We compiled the following list of 98 accounts who took part online in the conference and engaged directly with COBACORE; either through conversations and/or in the online COBAGame: <https://twitter.com/CobacoreUpdates/lists/iscram2015>.

Digital Angel Perspective. Also during the event we had a team monitoring the inputs on COBACORE. What became clear is that an important role emerged for these users in the scenario. The platform allowed these users to directly affect the ‘situation’ without being geographically present. In fact, as these users were able to act in a non-stressful, better connected, environment, they were able to become ‘digital angels’ to the attendees who were using the platform at the conference, akin to already existing initiatives such as the StandbyTaskForce).

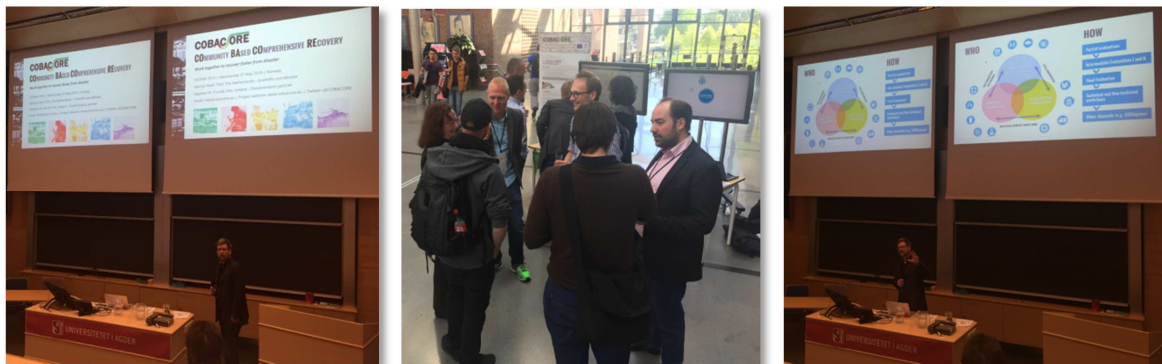


Figure 5: COBACORE Stand & Presentation

4 Conclusion

As the central theme of the conference *‘Getting ready for the unexpected’*; the conference showed many examples of ongoing research and projects that work towards building systems that are part of these preparations. Throughout the conference, both in the sessions and the various discussions taken place in the side-event, it became evident that effective crisis response and disaster management is no longer the task of a single organisation, or even the government as a whole. Disaster management should be regarded as a shared responsibility between responding agencies, those affected and those who offer they help.

The sharing of knowledge and experiences with academics, first responders, relief organisations at the ISCRAM conference is not only a great opportunity, but even a necessary step toward addressing these issues. The combination of attendees and topics made the ISCRAM conference not only a valuable outlet for the COBACORE project results thus far, but also proved to be a valuable resource to connect to other researchers and projects with complementary interests.



Figure 6: Attendants of the ISCRAM Conference 2015

5 Appendix

5.1 EU Symposium projects


Stefan Sackmann	Martin Luther University	Germany	Hands2Help	Hands2Help	Hands2Help - An App-based Concept for Coordination of Disaster Response Volunteers	University of Halle-Wittenberg, Germany	http://informationsmanagement.wiki.uni-halle.de/projekte/hands2help/	
Dimitrinka Atanasova	University of Leicester	UK	CascEff	Modelling of dependencies and cascading effects for emergency management in crisis situations	Social media analysis for crisis management: Evidence from the 2014 UK floods	EU FP7	www.casceff.eu	@CascEff
Concetta Marietta	Sicily Regional Civil Protection Department	Italy		Alert System in crisis management	Alert System in crisis management	Sicilian Region - Civil Protection Department		
Jens Pottebau	University of Paderborn, C.I.K.	Germany	SecInCoRe	Secure Dynamic Cloud for Information, Communication and Resource Interoperability based on Pan-European Disaster Inventory	SecInCoRe – Consolidating knowledge to support first responders and Police authorities	FP7. Area 10.5.1 "Information management", Topic SEC-2013.5.1-1 "Analysis and identification of security systems and data set used by first responders"	www.secincore.eu	@FP7_SecInCoRe
Ilan Kelman	UCL/NUPI	UK/Norway		Perceptions and understandings of climate change and migration: Conceptualising and contextualising for Lakshadweep and the Maldives	Crisis, climate change, and mobility (or not): Information and evidence from Maldives and Lakshadweep	Research Council of Norway	www.manystrongvoices.org	@SidsArctic
Anna Stachowicz	ITTI Ltd.	Poland	FP7_ISAR+	Online and Mobile Communications for Crisis Response and Search and Rescue	ISAR+ Online and Mobile Communications for Crisis Response and Search and Rescue	European Union Seventh Framework Programme (FP7/2007-2013)	http://isar.it12.eu	@ISAR_EU
Anders Lönnermark	SP Technical Research Institute of Sweden	Sweden	CascEff	Modelling of dependencies and cascading effects for emergency management in crisis situations	CascEff - Better understanding of cascading effects in crisis situations for improved incident management	EU FP7	www.casceff.eu	@CascEff
Therese Friberg	University of Paderborn	Germany	EmerGent	Emergency Management in Social Media Generation	Use of social media before, during and after an emergency	EU FP7	www.fp7-emergent.eu	@FP7_Emergent
John Sabou	Leiden University	Netherlands	NITIM	Decentralized Crisis Management : A case for unifying crisis response culture	N/A	EU FP-7, Marie-Curie Foundation	http://www.nitim.org/	N/A
Denis Havlik	AIT Austrian institute of technology GmbH.	Austria	CRISMA	Modelling crisis management for improved action and preparedness	CRISMA framework, decision support concepts and applications	EU FP7	http://www.crismaproject.eu/	
Ioannis Kotsiopoulos	EUROPEAN DYNAMICS	Greece	TACTIC	Tools, methods and training for communities and society to better prepare for a crisis	TACTIC online training and auditing platform	EU FP7	www.tacticproject.eu	@TACTIC_EU
Mario Fiorentino	Consorzio Interuniversitario Nazionale per l'Informatica (CINI)	Italy	SECTOR	Secure European Common information space for the interOperability of first Responders and police authorities	SECTOR: boosting for efficient data sharing in integrated heterogeneous first responders for complex disaster management	EU Collaborative Project CP-FP	http://www.fp7-sector.eu	@SectorFP7
Sylvia Steenhoek	Bundesamt für Bevölkerungsschutz und Katastrophenhilfe	Germany	INSIGHT	Intelligent Synthesis and Real-time Response using Massive Streaming of Heterogeneous Data	Advancing Emergency Response using Big Data Analytics	European Union	www.insight-ict.eu	@Insight ICT
Liz Bacon	University of Greenwich	UK	POP-ALERT	Population Alerting: Linking Emergencies, Resilience and Training	POP-ALERT: Linking Emergencies, Resilience and Training	EU FP7	http://www.pop-alert.eu/	@popalerteu
Khurshid Ahmad	Trinity College Dublin, University of Dublin	Ireland	Slandail	Security System for Language and Image Analysis	Disaster Communications and the Social Media	EU FP7 Project sponsored under the theme: The impact of social media in emergencies (SEC-2013.6.1-1)	www.slandail.eu	@SLANDAILfp7
Adam Widera	WWU Münster/European Research Center for Information Systems	Germany	DRIVER	Driving Innovation in Crisis Management for European Resilience	DRIVER -Driving Innovation in Crisis Management for European Resilience	European Commission	http://www.driver-project.eu/	@DRIVER_PROJECT
Piet Sellike	Dialogik	Germany	FORTRESS	Foresight Tools for Responding to Cascading Effects in a Crisis	Fortress - Project: An overview	EU	http://fortress-project.eu	@FORTRESS_EU
Kush Wadhwa	Trilateral Research & Consulting	UK	BYTE	The Big data roadmap and cross-disciplinary community for addressing societal Externalities	BYTE: Big 'crisis' data	EU FP7	http://bbyte-project.eu	@BYTE_EU
Suvodeep Mazumdar	University of Sheffield	UK	WeSenseIt	WeSenseIt: The Citizens' Observatory of Water	WeSenseIt: Citizen Observatories of Water	EU	http://wesenseit.eu/	@WeSenseIt
Jose Julio Gonzalez	Centre for Integrated Emergency Management	Norway	SMR	Smart Mature Resilience	European Resilience Management Guidelines	H2020, Secure societies, DRS-7-2014	Pending	Pending
Martijn Neef	TNO	NL	COBACORE	COBACORE – Community Based Comprehensive Recovery		EU 7th Framework Programme	www.cobacore.eu	@COBACORE
Sabri Mahdaoui	Europroject	BL	Snowball	Snowball		EU 7th Framework Programme	http://www.snowball-project.eu	@SnowballEU

5.2 Posters

Poster 'Towards empowered communities in decision making processes'

Towards empowered communities in the decision making processes

Kenny Meesters (k.meesters@uvt.nl), Tilburg University



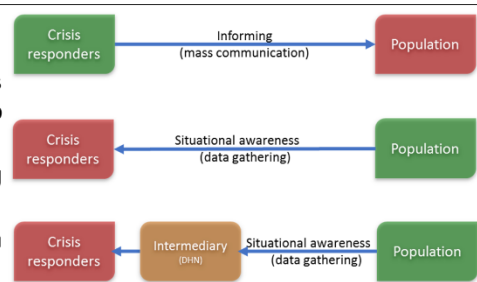
CIEM, University of Agder, Kristiansand, NO


Current ICT use in interactions

Recent technological innovations and societal changes have provided crisis responders with new means to interact with affected communities:

- 1) Provide information to the affected population utilizing new communication channels such as social media.
- 2) Gather information about the affected population using a variety of information sources, either gathered directly or through an intermediary such as the standby task force.

Although a lot of data and information is collected using new technologies such as social media, the inclusion of that data in the decision making process is limited. In particular to option to directly engage specific communities to obtain or provide information.





Community driven needs assessment
(Philippines 2013, credit DRL)

Potential ICT use in interactions

In general we see two related trends, with IT as enabler for them:

- 1) The increased collection of data to improve the quality of decisions.
- 2) Increased recognition for community involvement in the disaster response, an increasing role in rescue, relief and recovery.

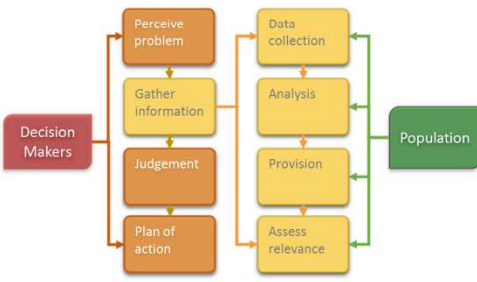
While these two trends are related (emerging ICTs are an enabler for direct community involvement) they don't seem to be integrated in disaster response operations.

Engaged communities however have the potential to improve the effectiveness of response and recovery operations through information sharing. This requires a better understanding of the options that new information and communication technologies provide as well as better understand how communities can be involved in formal processes.

Research

Objective: Active involvement the community in the decision making processes, in particular the inclusion in the information gathering process.

Design research method: (1) Case-based ethnographic field research combined examining current practices and potential for ICT to integrate and support community involvement. Combined with specific exercises to examine adoption and integration challenges. (2) Development of new initiatives for example in EU FP7 COBACORE project, develop concepts with NGOs. (3) Experiments to test developed concept and models using serious games as an evaluation environment for developed concepts and ICT innovations.



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Crowley, J., & Chan, J. (2010). Disaster Relief 2.0: The future of information sharing in humanitarian emergencies Disaster Relief 2.0 : : HHI; United Nations Foundation; OCHA; The Vodafone Foundation.

Gralla, E., Goentzel, J., & Van de Walle, B. (2013). Field-Based Decision Makers' Information Needs. Digital Humanitarian Network, Geneva.

Meesters, K., & Van de Walle, B. (2014). Serious Gaming for User Centered Innovation and Adoption of Disaster Response Information Systems. International Journal of Information Systems for Crisis Response and Management (IJISCRAM), 6(2), 1-15.

Poster 'Towards an Information Framework for Community Based Comprehensive Recovery'

Towards an Information Framework for Community Based Comprehensive Recovery

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Introduction

The Community Based Comprehensive Recovery (COBACORE) platform is intended to facilitate enhanced communication flows in order to enhance situational awareness, inform and guide response planning, and ensure more effective co-ordination of the activities of the volunteer responder community.

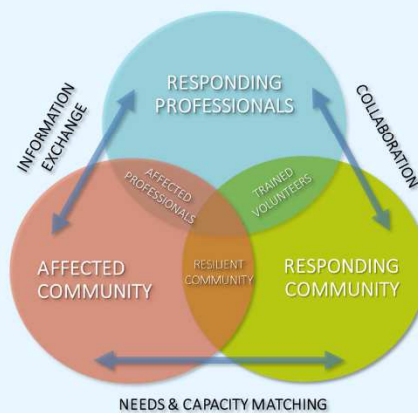


Figure 1. Enhance Communication Flows

The platform will utilize semantic modeling to provide an overall view of the data required for situational awareness and sense making within the confines of disaster recovery.

Background

A variety of domain-specific ontologies have been developed for disaster information management. In spite of progress made, the utilization and application of crisis management ontologies largely remains relatively immature. In addition, very few are formally represented and publicly accessible. While it is clear that several state-of-the-art ontologies exist for describing various aspects of disaster response and management, they remain somewhat incomplete in terms of fully describing the disaster and recovery domain, thus provide scope for the development of ontologies for missing subject areas (Liu, et al., 2013).

Core concepts & ontology

Through domain analysis and interactive evaluation with stakeholders, we derived core concepts for use in disaster recovery contexts:

- **Actor:** individuals and groups that have needs, capacities and participate in activities
- **Need:** expression of a necessity by an Actor
- **Capacity:** a potential resource that could be used to help fulfill a Need
- **Activity:** an action that may be a direct response to a Need

The current iteration of the COBACORE ontology focuses primarily on the four core concepts, thereby providing the foundation for future specification of a complete ontology for disaster recovery. Figure 2 illustrates the Actor concept within the overarching COBACORE ontology.

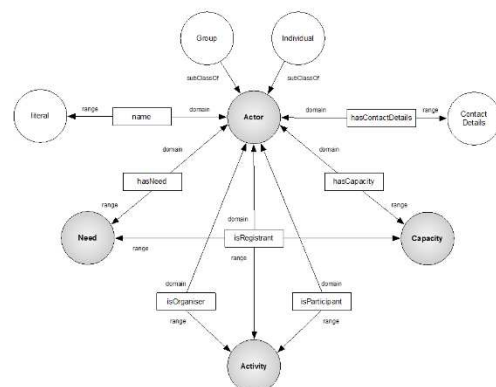


Figure 2. RDFS for Actor Concept

Future Work

Expansion of the ontology will be focused on the integration of existing crisis-orientated ontologies and vocabularies, along with utilization of the ontology in semantic modeling for improved sense making within the platform. It is anticipated that the eventual public release of a complete ontology will provide a basis for information modeling in similar, future initiatives.



The COBACORE project (Community-based Comprehensive Recovery) is funded by the European Union FP7 Security Programme under grant agreement no. 313308. More information: www.cobacore.eu

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